
Title	PardNor - PARAmeters for ingestion Dose models for NORdic areas. Status report for the NKS-B activity 2008
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Abstract	<p>The ECOSYS foodchain model is built into the European standard decision support systems ARGOS and RODOS, which are integrated in the preparedness for radiological events in the Nordic countries. However, a review has revealed that a number of parameters in ECOSYS do not reflect the current state-of-the-art knowledge, and do not adequately represent Nordic conditions. Improved and country/region specific data is required for ECOSYS to give trustworthy results. It is the aim of the PardNor activity to collect new data, and thus enable reliable use of ECOSYS for scenarios involving contamination of Nordic food production areas. In the reported work period of the PardNor activity, analyses have been performed for each Nordic country to determine the sensitivity of the ingestion dose end-point in ECOSYS to variation in 9 selected, potentially important parameters (human dietary components and animal fodder components). This parametric sensitivity was found to vary considerably between the different Nordic countries, reflecting considerable differences in diet and domestic production, and highlighting the importance of last year's work to identify appropriate location-specific parameters. A simple empirical Danish soil temperature based methodology for calculation of more reliable location-specific values of leaf area index (LAI) was tested for Swedish conditions and applied to estimate the seasonal LAI variation in other countries. The leaf area index reaches its maximum value much earlier in the southern parts of the Nordic region than in the northern. This means that the conditions for deposition and interception to vegetation would over a certain time span be very different in different Nordic areas. Also the influence on ECOSYS dose estimates of resuspension enrichment factors, leaching rates, fixation rates and desorption rates was investigated in the reported activity period, identifying new data sets where needed.</p>
Key words	Foodchain modelling, ingestion dose, ECOSYS, consumption habits, radioactive contamination
